

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An apparatus for feeding an anode into a metallurgical smelting reactor, said apparatus comprising:
a feeding funnel made of at least one part for feeding at least one anode at a time into the smelting reactor;
a bending element; and
an anode for essentially completely bending the anode bent on both sides with respect to the center of the anode and having a radius of curvature of about 1,000 – 3,000 millimeters,
wherein the bending element is configured to alter the falling trajectory of the anode such that the essentially completely bent anode meets the surface of a melt contained in the smelting reactor in an essentially horizontal position, the anode having a radius of curvature of about 1,000—3,000 millimeters.
2. (previously presented) An apparatus according to claim 1, wherein the feeding funnel is arranged in the immediate vicinity of the reaction shaft of the smelting reactor.
3. (previously presented) An apparatus according to claim 1, wherein the feeding funnel is made of two parts: a top part and a bottom part, so that the angle of inclination of the top part with respect to the horizontal level is larger than that of the bottom part.
4. (previously presented) An apparatus according to claim 3, wherein an angle between the top part and the bottom part of the feeding funnel is about 10 – 30 degrees.

5. (previously presented) An apparatus according to claim 1 wherein the feeding funnel is provided with a trajectory-shifting element in order to alter the trajectory of the anode.

6. (previously presented) An apparatus according to claim 3, wherein the distance between the bottom part of the feeding funnel and the surface of the melt contained in the reactor is 0.8 – 1.3 meters.

7. (previously presented) An apparatus according to claim 1, wherein the bending element for bending the anode consists of four rolling rollers that are located above the feeding funnel.

8. (previously presented) An apparatus according to claim 7, wherein the rolling rollers have a diameter ranging from 100 — 500 millimeters.

9. (previously presented) An apparatus according to claim 1, wherein the anodes are arranged to drop into the smelting reactor one by one.

10. (previously presented) An apparatus according to claim 1, wherein the anodes are arranged to drop into the smelting reactor in batches of several anodes.

11. (previously presented) An apparatus according to claim 1, wherein the anode is arranged to drop into the smelting reactor so that the anode grip brackets are pointed upwards.

12. (previously presented) An apparatus according to claim 1, wherein in connection with the feeding funnel, there are provided at least two shutter elements for preventing the furnace atmosphere from leaking to the surroundings.

13. (previously presented) An apparatus according to claim 1, wherein the feeding funnel is provided with elements for guiding the sliding direction of the anode.

14. (withdrawn) A method for feeding an anode into a metallurgical smelting reactor comprising:

feeding at least one anode at a time through a feeding funnel, the feeding tunnel being made of at least one part;

bending the anode essentially completely by means of a bending element, so that the anode meets the surface of the melt contained in the smelting reactor at an essentially horizontal position; and

bending the anode in the bending element so that the obtained radius of curvature for the anode is essentially 1,000-3,000 millimeters.

15. (withdrawn) A method according to claim 14, wherein the bending element is made of four rolling rollers with a diameter of 100 – 500 millimeters.

16. (withdrawn) A method according to claim 15, wherein the anodes are dropped into the smelting reactor one by one.

17. (withdrawn) A method according to claim 15, wherein the anodes are dropped into the smelting reactor in batches of several anodes.

18. (withdrawn) A method according to claim 15, wherein the anode drops into the smelting reactor so that the anode grip brackets are pointed upwards.